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AUTHOR	Simic, Marjorie
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ABSTRACT

Two factors contributing to the change in writing instruction have been (1) the research investigating the way writing is taught and (2) the computer. Proponents of the various writing models endorse writing as an ongoing, multi-stage process, with equal emphasis given to each of the stages. Educational computing has undergone a change of focus regarding how the microcomputer should be used in language arts, especially in writing. As a tool for practice in writing, the word processor's usefulness is unparalleled. Even a beginner can use the delete, strikeover, and insert functions to make simple changes. Teachers can get around the typical problem of too few computers in the classroom by having children write on paper first. The word processor has helped realize the advantages offered in process writing. Revising, editing, and printing multiple copies becomes easy. For effective use of the word processor, schools must make a commitment to its use, and the classroom teacher must make an even stronger commitment to invest a great deal of time in teaching students how to use it. The ideal situation would be to place the teacher at the front of a computer for whole-class instruction. However, a peer-tutoring system can also work. In any case, the key is as much "hands-on" activity as possible. (RS)

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Indiana University
2805 E. 10th St., Suite 150

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Bloomington, IN 47408-2698
(812) 855-5847; (800) 759-4723

Computer Assisted Writing Instruction

by Marjorie Simic

Two factors contributing to the change in writing instruction have been the research investigating the way writing is taught and the computer. Research has found that most teachers are concerned with the final product of writing, but have little understanding of the process that successful writers use in creating that product (Hansen, 1987; Harste et al., 1988). Traditionally, students have been asked to produce compositions on demand, with little guidance on how to work through the steps that quality writing requires.

Proponents of the various writing models endorse writing as an ongoing, multi-stage process, with equal emphasis given to each of the stages. But whether writing is taught by the process approach or by a traditional method, one of the barriers to producing good writers is that students must use pencil and paper to transcribe their thoughts and ideas. Many children are able to express thoughtful experiences, but have difficulty with handwriting; they labor over the first draft. To them, making revisions and recopying becomes an overwhelming burden. It is heartbreaking for a teacher to see a child, out of frustration and despair, tear up and throw away a composition because repeated erasures have made holes in the paper. The original enthusiasm the student had for the writing assignment may evaporate, and the student may approach the next assignment with anxiety and apprehension. Some writers, especially young writers, will make only those changes that do not require copying, regardless of how much the revision would improve their compositions.

Educational computing has undergone a change of focus regarding how the microcomputer should be used in language arts, and especially in writing (see Cochran-Smith, 1991). No longer are computers seen as tutors and drillers. Instead, educators now are realizing that the computer is a tool for handling information. A word processor can become the centerpiece for an effective writing curriculum, encouraging early language production and providing students with opportunities to connect reading and writing. When integrating advanced technology into any curriculum, the teacher must always be aware that it cannot "eliminate" problems. But with instruction and support from the teacher and peers, most students can experience success in writing through the use of a word processor (Bright, 1990).

Marjorie Simic is an Educational Specialist with the Indiana Department of Education.

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Revising

As a tool for practice in writing, the word processor's usefulness is unparalleled. Writing researchers have long advised that the key to fluent writing is to write as much as possible. The key to exact writing is to revise repeatedly.

Newman (1984) discusses two important issues: the first is the relationship of recent research on learning to write to word processing. Newman says writing improves more "by experimenting with many aspects of the process at the same time" than by mastering separate skills and blending them. Word processing allows rapid alteration and manipulation of the text, helping writers sustain the mental images they are trying to capture while experimenting with language. The search/replace capability encourages synonym substitution, and the immediate access to a clean copy stimulates further language play.

Newman's second point is that there is a difference between using computers for drill and practice and using them for word processing. With drill and practice software, the computer is in charge—this software tells the user what to do and controls what is learned. With word processing, however, it is the learner who exerts control both in using the computer and learning to write.

The word processor was designed for revising and manipulating language. For inexperienced writers (who tend to make corrections at the word level), proofreading is easier on the computer. As writers become more experienced, they tend to make more complex changes. These "reorganizational" changes involve moving sentences and paragraphs around, reorganizing whole sections of articles, inserting new materials, and discarding writing that no longer fits or serves.

Even a beginner can use the delete, strikeover, and insert functions to make simple changes. Later, with a brief period of practice, more complex changes, such as changing the order of the sections in a paper or adding passages written in another draft, can be made.

Ideally, freewriting also can be done at the computer. This

would encourage students to engage in learning and self-discovery rather than to focus upon the mechanics of exact writing. The word processor can release the writer from restraints that inhibit the free flow of words and ideas. Students can feel free to take risks in their writing because they see that they can always change their minds.

Classroom Problems

Teachers can get around the typical problem of too few computers in the classroom by having children write on paper first. Then at the word processor, students can "fine-tune" their papers. Concepts presented in the first draft can be examined for clarity and sufficient elaboration. Additional information can be added, if necessary, to make ideas more concrete. Finally, the text can be checked for minor errors and punctuation.

Before word processing, this instructional model of writing was not implemented due to the amount of time involved in extensive rewriting or retyping. Most teachers and students were not convinced that the benefits of the revision process were worth the time-consuming mechanics of repeated writing. Students were often apprehensive of even beginning to put their thoughts down on paper because of the work and time involved in making corrections.

The word processor has helped realize the advantages offered in process writing. Rewriting and revising are allowed to be the cognitive processes they should be, rather than being dominated by the mechanical aspects of actually putting words down on paper. Students learn to approach their writing errors from a different point of view by struggling to understand what causes problem phrases, sentences, or paragraphs.

Besides revising and editing, another benefit of using a word processor is that multiple copies can be printed for reading in peer-editing groups. Final copies can be displayed on a writing bulletin board or in a collection of writings, without any student's work showing to a disadvantage because of poor handwriting. And the additional benefit to the student is having an audience other than the teacher.

Teacher Commitment

The word processor offers great advantages but also makes great demands. For effective use of the word processor: (1) the school must make a commitment to its use; and (2) the classroom teacher must make an even stronger commitment, since the teacher must invest a great deal of time in teaching students how to use it. Additionally, teachers must become familiar with the word processor themselves before using it in the classroom. Teachers must also decide when and how to give word processing instruction to their students.

If the entire class will use the word processor, the ideal situation would be to place the teacher at the front of a computer for whole-class instruction. However, a peer-tutoring system can also work. This requires a minimal investment of the teacher's classroom time, and it can be just as efficient. A peer system can be set up by showing just one group how to use the word processing program. Then have each of these students teach at least one other student word processing. Teach the commands as the students need them. A small group of students can learn quickly from the teacher, or they can use the tutorial that comes with some word processing programs for back-up.

In any case, the key is as much "hands-on" activity as possible. One does not learn to word process by listening to the teacher talk about it; one learns by doing it. If composition by computer is to become as natural an act for children as composition by handwriting, they must be allowed sufficient time to develop proficiency with the keyboard and with the specific word processing commands.

Teachers may be concerned with the fact that only one student at a time can use the word processor and printer. Many activities can be structured so as to allow "advisers" to work with the person typing. Researchers have described this "sharing" process as central to writing instruction. Working in a group helps make writing an interactive activity. Children receive immediate feedback from others, making them aware of the need for clarity and for expressing their ideas so that they can be understood by others. This interactive feedback is extremely helpful to writers engaged in revision. It also provides each writer with experience in helping others revise their writings. Composition teachers have recognized that word processing is revolutionizing writing. Revision, long advocated but ignored by both teachers and students as too mechanical and painful, is now possible by pressing a few keys. However, computers do not change the central role of the teacher. If writing and revision can be made easier through effective writing instruction and word processing, then, hopefully, students will begin to write because they enjoy it rather than because they are forced to do so.

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